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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

SEP 1 1923

REPORT FOR WEEK ENDING SEPTEMBER 1, 1923.
(Unless otherwise indicated.)

JUDITH BASIN:

The past week was distinguished by being the driest and containing the longest period of dry weather which has occurred since June 15. A shower totaling .20 inch precipitation was received on the 26th but the following six days were warm, clear, and favorable to the ripening of grain crops.

The maturity of spring wheat has advanced very rapidly and a few of the earlier plats on the rotations are now practically ripe. Sunflowers are commencing to wilt and the second crop of alfalfa is beginning to burn. Corn is making good progress and is in the roasting ear stage.

Field work has been devoted chiefly to harvesting operations, cultivating of fallow fields and rogueing of rotation plats and increase fields. All increase fields are now harvested and the harvesting of all small grains on the rotations is completed with the exception of spring wheat and one plat of flax.

Mr. J. H. Martin, of the Office of Cereal Investigation, and Director F. B. Linfield, of the Montana Experiment Station, were visitors at the station.

Maximum temperature 84, minimum 49; precipitation .20 inch.

HUNTLEY:

Showers Sunday and Monday delayed the completion of threshing operations until Thursday. Flax and oats made yields a little below the average but higher than have been received for the last few years with the exception of 1922.

Fall plowing has been started under very favorable circumstances. The soil contains sufficient moisture to enable the work to be done with ease and the friable condition of the ground permits the making of a seed bed with a minimum of labor.

Northwestern Dent corn in the rotations is beginning to ripen. The husks are turning yellow and dry while the rest of the plant, in many cases, is still quite green. Later varieties and later plantings of early varieties of corn are still green and show few signs of maturity.

Precipitation for August totaled 2.16 inches which is 1.36 inches above the 13-year average for the station. This is also the greatest amount of rainfall ever recorded here for August.

Maximum temperature 92, minimum 47; precipitation .48 inch.

SHERIDAN:

The entire week has been quite favorable for field work. Sudan grass has been harvested, except for one block left for seed. Seed corn was picked during the week. About one half of the corn plats in the Rotation field were harvested. The remainder will be ready to cut some time during the coming week. All of the early flint varieties and four of the dent varieties of corn were harvested.

Sheridan, continued:

Grasshoppers are working on the early winter wheat which has emerged. So far the damage has not been as great as last year, when the August 1 seeding was killed out entirely.

Mr. Fred D. Richey, in charge of Corn Investigations, visited the station on the 26th.

Maximum temperature 87, minimum 42; precipitation .26 inch.

ARDMORE:

The total precipitation for the month of August was 3.09 inches. This may be compared with the 11-year mean for the same month at this station which has been 1.18 inches. Days and nights have been remarkably cool, with much cloudy weather.

The harvesting of silage crops on the station is well under way. Field No. 10, containing 12 acres of Payne's white dent, on fall plowed millet land has been put in the silo. The yield was 9,841 pounds per acre. This is the heaviest yield of corn silage ever produced on the station in a field of any considerable size. It was estimated that the grain yield was fully 40 bushels per acre.

Cattle used in the beef cattle grazing experiment were weighed at the end of the 30-day period on August 29. The average gains per head for each 30-day period during the present season have been as follows:

	June	July	August
150-Acre Pasture	64.0	37.0	60.7
80-Acre Pasture	62.0	46.0	46.0
160-Acre Rotation Pasture	67.7	34.5	47.2

Mr. E. H. Thompson, a graduate of Wisconsin University, with three years' experience in cost of production work at Washington with the Bureau of Animal Industry, arrived at the station on August 29. Mr. Thompson will remain at the station in charge of the work for the office of Animal Husbandry.

Maximum temperature 88, minimum 41; precipitation .26 inch.

MANDAN:

Horticulture.

Richard, Tonka, Red Wing, Minnesota #5, Minnesota #6, Cheney, Wolf, Sansota, Cheresota, Waneta, George and S.P.I. 36607 plums were picked during the week. Some of the Minnesota plums such as Tonka and Red Wing were especially good. Beta and Monitor grapes were also picked, there being a light crop.

Mandan, continued:

Tomato selection work for the year has been completed there being a heavy crop of most selections.

Harvesting of tomatoes, cabbages, beets, carrots, cucumbers, egg plant, and summer squash, is being continued in the acre garden.

About forty varieties and selections of plums, and about thirty of apples and crab-apples, were shown at the local fair. Some of these will also be shown at Dickinson.

The pit silo is being filled with corn. Oats and barley in the feed fields and rotations, have been threshed during the week. Corn in the rotations is matured and in good condition for cutting. The cattle in the Cooperative Grazing experiment were weighed at the end of the month. All showed good gains with the exception of those in the Brome grass and the 30-acre pastures; these are short of feed.

Mr. A. W. Emerson returned to the station this morning, having completed his shelterbelt inspections for the present season. Mr. R. W. Hansen is expected in this coming week.

Visitors of the week included Dr. H. L. Walster, of the North Dakota Agricultural College; Mr. G. G. Ainslee, Office of Cereal and Forage Insect Investigations; Miss M. Martini, Office of Cereal Investigations. At the request of the Missouri Slope Fair Association, selections of fruit and corn, grown at the station, were furnished for display at the Fair held at Mandan this week. The fruit in particular, proved of continual interest, and quite a large number of farmers and others visited the station asking information and advice on fruit growing.

Maximum temperature 90, minimum 44; precipitation .23 inch.

HAVRE:

The week has been generally clear and dry with especially the minimum temperatures higher than for the previous week. This condition has been favorable for the maturing of corn, some of which is now almost mature enough for seed. Ears are larger than they have been since the station work started. Some of the ears show a partial lack of fertility due probably to grasshopper injury at the time of fertilization.

Work of the station has been largely harvesting of irrigated grains and the preparation of the feeding experiments for the spring pigs. Threshing of plats will be started as soon as possible now.

A meeting was attended at Great Falls on August 31, called by the State College to discuss the grasshopper situation. This was attended especially by entomologists of Montana and the adjoining Canadian Provinces. The information presented showed that there has been a decided increase in the migratory type of grasshopper, that because of its migratory habits organization on a large scale is necessary in order to successfully control outbreaks, and that so much abandoned land and so much prairie land that serve as breeding ground that the poison mash is the most successful method of control.

Havre, continued:

The Province of Alberta last year were able to control the hoppers and had them well under control. As the only territory this year that was badly infested it seems probably that they migrated from Montana where they hatched.

ARCHER:

The weather during the past week has been very favorable for field work and the maturity of crops. Friday, August 31, an exceptionally heavy rain occurred accompanied by some hail. The hail did very little damage. The precipitation measured 1.67 inches. It came very suddenly and a great run-off occurred.

Coincident with the rain was a visit of the Cheyenne Commercial Club including Governor Ross. The experiment field had been inspected and during the storm the dairy plant was considered. The visitors expressed eagerness to have the station continue its present work and also to enlarge upon it.

On Wednesday, August 29, the Lion Club of Pine Bluffs, visited the station and were served luncheon. This group of visitors not only included the club members but a number of guests from the farming community. Both groups of visitors were impressed by the rust resistant qualities of Acme and Kota. The results secured by the furrow drill and duck-foot cultivator received special attention. Keen interest was manifested in the charts showing the advantages of corn in a rotation with small cereals as compared with a one crop system of wheat.

Mr. J. M. Stephens, of Mandan, and Mr. J. F. Brandon, of Akron, were station visitors August 29.

Maximum temperature 81, minimum 42; precipitation 1.70 inches.

AKRON:

Corn is not yet sufficiently matured for the silo. There has been a lull the past week in the strenuous field activities which have held the station force all summer. Opportunity was afforded for many minor improvement jobs, among which was the completion of the salvaging of the material in the old office building, the wrecking of the tower supporting the vaneless windmill and the lowering and painting of the tower formerly standing back of the barn which it is now planned to erect to support the vaneless mill. Some dead trees were removed from the forestry, and other dead trees were removed from the windbreak separating the orchard and the plat of ground where the buildings are located. Wachampa and Cheresota plums were picked during the week and six bushels of the fruit sold to local farmers.

Mr. J. F. Brandon accompanied by Mr. J. M. Stephens left the station by auto for Archer, Wyoming, Tuesday afternoon. Cheyenne was made that night and the Archer Station visited Wednesday forenoon. Ft. Collins was made early Wednesday afternoon where the party was shown something of the Agronomy and Animal Husbandry work being conducted at the State Agricultural College. The return trip to the station was made Thursday morning arriving at 2:30 p.m.

Akron, continued:

Mr. L. L. Zook, Agronomist at the North Platte Station visited the station Wednesday morning. President Charles A. Lory and Professor Alvin Kezer, of the Agronomy Department of the State Agricultural College, visited the station Thursday afternoon. Mr. C. W. Warburton, of the Cereal Office, arrived Friday and left Saturday after looking over the Cereal Experiments. Mr. Fred D. Richey also arrived Friday, spending the remainder of that day and part of the next in the Corn Breeding plat. Mr. H. M. Vinall, of the Forage Office, accompanied by Messrs. Getty, Kephard, and Alexander of the Hays Station, arrived Friday to go over the Forage Experiments.

Winter wheat seeded August 15 on the Cereal Project has emerged on the fallow land but not on the disked corn ground. The best appearing section passed through on the way to Archer was around Buckingham, Colorado, where corn, cane, and wheat appeared to be exceptionally good for dry land crops. It was very evident even there that rust had damaged the wheat greatly. The Archer station presented a very good appearance, the crops offering very good evidence of the agricultural possibilities of that section. That station was ready to begin harvesting of the small grains.

Maximum temperature 89, minimum 48; precipitation .09 inch.

HAYS:

Kafir is about all headed except on the continuously cropped plats. On these plats where the stand happens to be about normal it is not heading well. It has been suffering during the past month from drought even though there have been numerous showers and four rains ranging in amount from .70 to .80 inch each.

Milo survived, or made a very much better recovery after the hail, therefore, is much thicker. Practically every plant survived and has produced numerous suckers. The growth is so thick that this crop has suffered much more from drought than kafir. Milo has headed well on fallow, but on the continuously cropped plats it has failed to make any heads except on the marginal rows. The ground is very dry and there are numerous large cracks in the ground.

Corn made a very poor recovery after the hail. The growth produced after the hail was feeble and was badly used by the short droughty periods. It failed to produce any ears and was harvested August 18 for fodder.

Cane is heading slowly. It, too, has suffered from drought. As for stage of development, the kafir, milo and cane on the project are all about alike, ranging from the bloom to soft dough stage.

Although there has been but little if any moisture accumulated in the soil below the second foot, and not much in the second, there has been sufficient moisture to make it possible to work the surface soil into a good seed bed for fall seeding, where the ground was worked,-that is plowed, listed, or disked early.

Hays, continued:

During the week the work has consisted largely in tillage and the spreading of grasshopper poison.

On the commercial fields the work has been working down of ridges for wheat and stacking of Sudan hay.

Generally, it has been very quiet and hot during the day and cool at night.

Maximum temperature 101, minimum 53; precipitation 1.10 inches.

GARDEN CITY:

Growing conditions have remained favorable throughout the past week. Some of the plats are rolling during the afternoon but seem to revive at night. Most of the sorghum plats are looking good.

The winter wheat seeded on August 20 is up to a fair stand. The second date of planting of winter wheat was made today.

Yesterday the first Annual Farmers' Picnic and Field Day was held on the station. About four hundred people including farmers and their families and business men were in attendance. The program consisted of speeches by Professor L. E. Call, of the Kansas Station, Mr. George S. Knapp, State Irrigation Commissioner, Superintendent F. A. Wagner, Mr. B. R. H. d'Allemand and Mr. A. K. Ohmes. A basket dinner was served at noon. After the program the visitors were conducted over the experimental plats on the station.

Station visitors this week included Supt. E. F. Chilcott, of the Woodward Station, Mr. A. L. Hallsted, of the Hays Station, Mr. R. E. Getty, of the Hays Station, and Mr. H. N. Vinall and Mr. L. W. Kephart, of the Forage Crops Office.

Maximum temperature 97, minimum 52; precipitation .3 of an inch.

DALHART:

Another unusual week has passed. The temperatures have been about normal for this section with an unusual amount of rainfall. There were three rains during the week which were as follows: August 27, 1.00 inch, August 28, .11 inch and August 30, .06 inch, making a total for the week of 1.17 inches. The fields have been too wet to do any field work except on fallows and where there is no vegetation. They were dry enough to cultivate Friday in order to prevent soil blowing. There was a good heavy breeze all day Thursday which caused some soil movement.

The vineyard was cultivated Friday in order to check soil blowing. Some of the fallows are still too wet to work. The fields occupied by row crops are too wet to touch. Soil sampling had to be omitted on account of wet weather. The orchard was gone over with the orchard cultivator Friday. More cultivating is being done today where the soil is dry enough.

Dalhart, continued:

Unless frost holds off a little late this year it is quite likely that a good bit of grain will be caught before maturity. There is considerable that is just heading at this time. The cool nights have a tendency to check the growth and maturity of crops at this time of year. Conditions are so favorable in this section this year that there is going to be an unusual acreage of wheat planted this fall according to prediction.

Considerable repair work is going on this week since other work cannot be done. There had been so much dry weather that some of the buildings dried out on the roof so that much damage was done due to leakage. The most damage was done to the mess house where the leaks caused all the plaster to fall off the bath room ceiling and did damage to the ceiling in the hall. This is being repaired at this time.

Total precipitation for the month of August was 6.92 inches.
Maximum temperature 88, minimum 56, precipitation 1.17 inches.

TUCUMCARI:

Crops have grown exceptionally well the past week and grain sorghums are maturing rapidly. Milo in the center field was harvested and will make only fair yields, for rains came too late to materially benefit these plats. Cotton plants are small, but fairly well loaded with squares; there is grave danger that cotton will not open well this fall, for this crop is late and the nights will soon be cool, in all probability. Broomcorn fired badly before the rains, but has revived greatly and will make fair yields. The increase cane on the station now bids fair to make a very heavy tonnage, probably sufficient for steer-feeding requirements.

With five rains during the week, total precipitation 1.61 inches, field work was impossible much of the time. Broken sewer tile were replaced and the holes filled, two hay racks were rebuilt, and plant and stalk counts were begun. Between rains cotton was cultivated and a small amount of harvesting was done.

The past month, precipitation 5.64 inches, is second highest August since records were begun here in 1905. Rainfall this year to date totals 17.09 inches, only 0.40 inch below the average annual. In spite of this fact, early planted plats will make less than average yields, due to the seven weeks drought which was broken August 16.

Maximum temperature 89, minimum 57; precipitation 1.61 inches.
Evaporation 1.718 inches. Wind Velocity 4.3 miles per hour.

BIG SPRING:

The weather has been comparatively cool during the past week, although it is very dry. Good rains have been reported in various parts of the county, but only very light showers have fallen at the station.

Big Spring, continued:

As a result of the dry spell all crops are maturing very fast, most especially the grain sorghums. The milo in the lister methods series was harvested today as were some of the plats in the rotations. All of the milo in the rotations will be ready to harvest by next week. The corn, which was a very light crop, was harvested this week. Other work of the week consisted of hauling in Sudan grass hay and cowpea hay from the commercial fields. A good yield of fine quality hay was obtained from both of these crops.

Maximum temperature 97, minimum 61; precipitation .35 inch.

LAWTON:

Two rains, one of 0.73 of an inch on the 27th, and another on the night of September 1 amounting to 0.88 of an inch, together with favorable temperatures and low wind velocity continue to make farm conditions more cheerful.

Cotton continues to show some improvement but most sorghum crops were too far gone to benefit much from the improved weather conditions.

While there is moisture in the surface soil farmers are rapidly completing the seed bed preparation for wheat and it is quite likely that considerable early seeding will be done. Grasshoppers are still numerous and may cause damage to early sown wheat.

The first date and rate of seeding wheat on the station was made September 1. The seed bed was in excellent shape and the rain which followed the planting should insure rapid germination.

The May 15 planting of sorghums and the June 1 and June 15 planting of dwarf feterita were harvested during the week. The dwarf feterita was the only variety on the above plantings to produce any grain. Some of the kafirs in the two later plantings may possibly improve within the next two weeks.

Maximum temperature for the week 97, minimum 65; precipitation 1.66 inches.

WOODWARD:

The weather has continued dry but somewhat cooler. Crops on the station are looking fairly good. Some of the earlier varieties are ripening and have been harvested. Some broom corn has been pulled and two varieties of cowpeas have been cut for hay. Several hundred pounds of grapes, several bushels of plums, and a few peaches have been picked. Mr. E.F. Chilcott, Superintendent, returned from an inspection trip to stations in Kansas, Wyoming, and Colorado, last Tuesday.

Maximum temperature 98, minimum 57; Evaporation 2.055 inches.

Average Wind Velocity 6.8 miles per hour.

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REPORT FOR WEEK ENDING SEPTEMBER 8, 1923.

HAVRE:

The activities of the station during the last week have been largely threshing the plats. Weather has been ideal for this and all is now completed with the exception of the Methods of Fallow and the winter wheat plats that were reseeded this spring.

The following are the maximum and minimum yields from each crop, the averages having not yet been computed:

Crop	Maximum Yield	Minimum Yield
Spring Wheat	28.9 on 570	7.0 on 3 b
Oats	56.3 8 a	13.4 on 576
Barley	29.2 7 a	1.0 . MCF

During the week corn has ripened very rapidly and some of it will be ready to harvest the coming week. Some of the later and more immature plants will not fill if the present dry and warm weather continues.
Maximum temperature 88, minimum 45; precipitation .05 inch.

JUDITH BASIN:

The warm dry weather, which commenced last week, has continued practically unbroken. A light shower occurred on the 5th but the amount of precipitation received was insignificant. Conditions as a whole have been very favorable to harvesting and threshing operations and considerable progress has been made along these lines in the Judith Basin during the past two weeks.

Spring wheat on the rotations is ripening very unevenly and a few of the plats are still quite green. Corn is making exceptionally good progress, and with favorable weather, will be practically mature by the average date of the first killing frost.

Field work has been devoted to harvesting spring wheat and flax, hoeing corn plats on the rotation, cultivating trees and spreading grasshopper poison. Threshing of the increase field of Karmont winter wheat was commenced and although the wheat is averaging 30 bushels per acre, the yields are considerably lower than expected.
Maximum temperature 34, minimum 44; precipitation .03 inch.

HUNTLEY:

Hot and dry weather during the greater portion of the week hastened the maturity of corn and harvesting of this crop has occupied the last two days. All corn in the rotations and the early varieties in the variety test have been cut.

Huntley, continued:

Fall plowing is nearing completion as is also the preparation of ground for winter wheat and rye. The soil has been in excellent condition for working this fall due to the heavy rainfall of August. This factor of fall moisture is contributing to the sowing of a large acreage of winter wheat on stubble land. Many farmers in this district feel that the low price of wheat does not warrant their sowing the crop on the more expensively prepared seed beds exclusively. Bean ground and corn ground will replace much of the fallow ordinarily seeded to winter wheat.

Maximum temperature 93, minimum 43; precipitation .08 inch.

DICKINSON:

The weather has been dry with high temperatures during the day and cool nights. A maximum of 98 on September 3 is the highest temperature of the season. A rain is now needed for the benefit of grass and fall sown grain.

Corn has ripened fast so that some varieties are fully matured. Most of the rotations were cut September 7 and 8. The continuous series were greener than any others and were left standing. The silo will be filled in a few days.

Millet on disked corn ground in the new rotations weighed at the rate of 5200 pounds per acre.

The second Stark County Fair held September 4-6 was a success in attendance and in amount and quality of exhibits. Corn, vegetable and fruit exhibits were especially good for the locality.

Maximum temperature 98, minimum 37; precipitation .08 inch.

August rain amounted to .82 inch.

BELLE FOURCHE:

Threshing of the dry land grains has been completed. The yields of the different grains were as follows:

Wheat: maximum 34.2 bushels per acre on rotation 76; minimum, 4.8 bushels on plat A of the M.C. Series; average 27.9 bushels. Oats: maximum 74.7 bushels on rotation 5; minimum, 29.1 bushels on plat A of the M. C. Series; average 57.5 bushels. Barley: maximum 59.0 bushels on rotation 7; minimum 26.0 bushels on plat A of the M. C.Series; average 47.9 bushels. Winter wheat: maximum 28.8 bushels on Plat A of the M.C. Series; minimum 4.2 bushels on Plat D of the M.C. Series; average 22.0 bushels per acre. The one plat of flax yielded 12.0 bushels per acre.

The weather, so far in September, has been warm and dry. This has hastened the maturity of the cultivated crops. Corn is now out of the way of frost and sorghum is ready to cut. The potatoes are the best ever grown on the dry land at this station.

Bellefourche, continued:

The Butte County Fair and Feeder Hog Show was held September 4, 5 and 6. Over 700 hogs were on exhibition.

President Finley, of the Chicago & North Western Railway, delivered an address on transportation on September 5. On the morning of the 5th the officials of the Northwestern visited the Experiment Farm.

Mr. E. Z. Russell, of the Bureau of Animal Industry, judged the breeding classes and carload lots of feeders at the fair.

Maximum temperature 90, minimum 42; precipitation .17 inch.

ARDMORE:

The past week has been dry and cool with conditions very favorable for the prosecution of farming operations. Threshing of small grain is progressing very rapidly throughout the community and county.

During the week the work of harvesting corn and cane silage was completed on the station. Rotation corn plats were harvested and put in the shock, and considerable millet hay was stacked. Approximately 165 tons of corn and cane silage was put in the silos. Of this amount about 100 tons were delivered to the Dairy Division and 65 tons to the Animal Husbandry Division. Some of the more important yields of silage were as follows:-

Crop	Field Number	Acreage	Treatment Previous Year.	Yield Green Feed Per Acre.
Cane	2	1.64	Fallow and Manure	17,207
Corn	10	12.00	F.P. Millet Land	9,841
Corn	8	10.00	F.P. Hog Pasture	10,006
Corn	2	1.64	F.P. Sorgo Land	11,689

Yield of millet in one-tenth-acre variety test showed very little difference in the five varieties included in the test. The highest yielding variety was Goldmine #F.C. 22491 the average yield of which was 5020 pounds per acre.

Maximum temperature 90, minimum 35; precipitation 0.

ARCHER:

The weather has every indication of having cleared up for a while at least. The days have been warm with cool nights. On the morning of September 7 frost occurred in some localities. The minimum here on that date was 34 degrees.

Harvesting of small cereals will be nearly finished today. This includes the cereal plats.

Archer, continued:

On Friday a group of farmers visited the station to learn concerning the various crops and methods of tillage. Much interest was manifested. On the evening of the same day, Dr. Crane, President of the University, visited the station in company with Mr. Fullmer.

The station prepared a box of exhibits for the State Fair at Douglas.
Maximum temperature 80, minimum 34; precipitation 0.

AKRON:

Weather continues dry and very unfavorable for winter wheat seeding with a rather marked drop in minimum temperature. Corn is ripening fast and the grain and forage sorghums are burning badly. General work for the week has been that of an improvement character, such as the painting of the instrument shelter boxes, the painting of the clothes line poles, the removal of dead trees from the forestry planting, and the removal of dead limbs from the shrubbery plantings. The two sheep rotation fields to be seeded to winter wheat were duck-foot cultivated during the week, the first cultivation these two fields have received since being plowed in the spring and summer. The present cultivation appeared necessary to level up outstanding irregularities in the surface contour and to furrow and ridge the soil as a precaution against soil blowing this winter and coming spring.

Local County Fair passed into history with the passing of the week. Three very favorable days were had, Wednesday, Thursday, and Friday, and the crowds each day were satisfactory. One of the outstanding improvements over past years was the number of hogs shown this year, all pure bred animals as local fair rules bar grade animals. Some 350 pens of hogs or a total of some 500 hogs were shown this year. Cattle and sheep likewise were exhibited in increased numbers.
Maximum temperature 86, minimum 44; precipitation .30 inch.

COLBY:

The past two weeks have been moderately warm and dry, which has helped very much in the maturing of the corn crop and also in checking the growth of the sorghum crops. The early corn, that put in before the middle of May, is just now reaching a stage of maturity where a frost would not do any damage or, if any, the damage would be slight. While the corn that was put in after the first of June, due to the heavy May rains, if fully as good, though it will be at least two weeks later in maturing. While we have had several nights when the temperature reached 45 degrees the days have been sufficiently warm the past week to assist in maturing the corn. Estimated prospects for corn yields were probably never better for corn yields in this section of the state than they are this year. There is a larger acreage of corn in the county this year than has been true for a number of years.

Colby, continued:

Corn in this section of the state should average better than 30 bushels per acre, with some estimates as high as 35 or 40 bushels per acre for an average. There will probably be some fields which will go 50 bushels per acre. Corn has not suffered from lack of moisture at any time since it has been planted. The one factor which lowers the chance of estimating the average yield is the possibility of frost for the later corn and the thinner stands of some of the late planting, due to ground squirrels damaging the stand after the corn was up. The corn on the D.L.A. project has not been harvested with the corn binder. The plats will probably all do to harvest sometime during the coming week. The early fall plowed plats will be cut the first of the week if the weather permits.

Milo plats are all forming seed with several heads in the milk stage. Most of the milo should mature before our normal frost free period comes to an end, which is approximately four weeks off. If frost does not come before maturity the yields of milo should equal the best that we have ever produced on the station.

All sorghum crops look fine. The later ones will not, of course, have an opportunity to mature. Yields of forage will be very great. In the date of planting test with the sorghums, the June 1 date of planting milo in the thicker stands are mature now and will be harvested the first of the coming week. Several heads are beginning to mature in the June 1 date of planting Dawn Kafir, though very few. One head of Dawn Kafir has been selected which is fully mature at approximately two weeks ahead of the other in the same row. The past week the sorghums on all experimental plats have been re-rogued and smut heads cut off and carried out of the area. One very striking fact has occurred this year in our milo (Dwarf Yellow), that is, the presence of smut heads. They are not numerous but a good trace of smut heads have been found. The milo is true to type with no hybrids.

HAYS:

During the week the days have been warm to hot and the nights cool.

All sorghums which succeeded in heading are developing considerable grain. A good rain would improve conditions wonderfully if the rain could be followed by warm weather.

The sorghums which should have headed during the month of July made very few and poor heads due to the drought which covered the month. The plants were so injured that they have not responded to the August rains. The sorghums which reached the heading stage during August have made very good heads and are developing a nice lot of grain.

The results of planting sorghums on fallow as compared with continuous cropping of sorghums is very striking this year in favor of fallow. This is especially true with milo, which grain made a better recovery after the hail storm and as a result is thicker than other sorghum crops. Milo on continuously cropped ground has produced practically no heads except on the marginal rows while yields on fallow are estimated at 40 bushels.

Hays, continued:

The Expreiment Station Sorghum day and the Farmers' Picnic programs were made into one and was held on the Experiment Station grounds today, the 8th. The visitors brought basket dinners and the station furnished coffee, watermelon and ice cream for everybody. Following the dinner short talks were made by President Lewis, of the Hays State Teachers College, and Prof. L. E. Call, of Manhattan. These talks were preceded by a short address of welcome by Superintendent Aicher, who introduced the speakers. After the talks the remainder of the afternoon was spent in conducting the visitors over the station and experimental plats. About two hundred were present and an unusually large percentage of the visitors became much interested in the experimental plats of sorghums.

GARDEN CITY:

Ideal fall weather has prevailed throughout the past week. Comparatively warm days and cool nights have not caused the sorghum crops to mature as much as might be desired. All sorghums are late this year and unless frost holds off for some time yet the yield is likely to be decreased. Some of the milo plats are beginning to fire quite badly.

Most of the time this week was spent in threshing the small grain on the project. All yields were low and quality of the grain was very poor. The highest yield of wheat obtained was 5.5 bushels, on fallow in rotation. The second date of planting winter wheat was made Monday.
Maximum temperature 91, minimum 50; precipitation .22 inch.

DALHART:

The past week has been fairly warm during the day but cool at night. Heavy dews have occurred each night. There was only one rain during the week and it was light, netting .18 inch. There was just a little hail at the beginning of this rain but it lasted for only about a minute. No damage was done on the station by this. From about three miles west on up to about four or possibly five miles there was a severe hail. It destroyed the crops of two ranchers and killed some pigs and considerable poultry.

This week the fields were dry enough so that considerable field work could be done. All the cowpeas were cocked and the sorghums were shocked that were harvested earlier. The plats were prepared for the planting of winter rye with the exception of plat A of the continuous cropping. One field of increase milo and sunrise kafir was cultivated with a one-horse cultivator. The cotton and peanuts were also cultivated. Sudan grass for feed was harvested. One series of the general field was plowed. It was to have been fallowed during the summer but due to the delays from rain in June it was too dry by the time teams could be put on it to plow, so it was double disked and left until it could be plowed.

Dalhart, continued:

It has been so cool of nights that the crops do not seem to be making very rapid progress toward maturity. Some of the mornings feel like frost is just a little way off. Unless frost is delayed considerably there will be a lot of feed that is caught before maturity. Everything looks fine in this part of the country. The writer visited two ranchers the past week and found crops that will make around forty to fifty bushels of maize, good corn and an abundance of other feeds. One of these ranchers did not suffer from the dry weather on account of having received some rain that others did not get. His crop was just beginning to need rain when the heavy rains occurred.

Maximum temperature 85, minimum 52; precipitation .18 inch.

TUCUMCARI:

Crops have all grown exceptionally fast the past week, but field work has been delayed by the excessive moisture. Rainfall since August 16 totals 7.08 inches and pastures and late crops are thriving. Most of the broomcorn was pulled and seeded, cowpeas which had been cut before August 16 were at last cured and hauled, some harvesting of M.C. kafir and early maturing variety and date plats was done, and counting of plants was continued.

Cowpeas in the north field which had stopped growth previous to August 16 and were ready for harvest have resumed growth and have probably doubled in weight. Increase cane, rowed, stands head high and has suckered heavily, while very few heads have formed, while broadcast cane is nearly waist high and is beginning to head. Indications point to an abundance of roughage for carrying forty or fifty head of yearling steers this winter. Diggingof the new pit silo will be begun the coming week. Cotton is still putting on squares, but no bolls have opened. It is doubtful whether this crop will fully mature.

Maximum temperature 85, minimum 54; precipitation 1.44 inches.
Evaporation 1.474 inches. Average wind velocity 1.8 miles per hour.

LAWTON:

Cool weather and local showers have prevailed the past week. The wind velocity has been at a minimum and heavy dews occurred each night.

Cotton on the tight land is opening up and considerable is coming to market. On the sandy land the cotton is opening more slowly. Fairly good yields will be produced on a majority of the sandy land but tight land production will be very light.

Preparation for wheat progresses steadily throughout the county and a little early seeding has already been done. In most places there is sufficient surface moisture for germination.

Lawton, continued:

Wheat seeded on the station Septemberlcame up to a good stand about the 6th. Alfalfa seeded in a cotton plat, Rotation 142, on August 28 also came up to a good stand.

Township Fairs were held at several points in the county during the week. The exhibits were fair in quality but lacking considerably in quantity.

A rain of 0.70 inch fell on the 4th, but the territory covered was very small.

Maximum temperature 91, minimum 55.

WOODWARD:

The weather still remains dry but not so hot. Since the 19th of June we have had only 1.32 inches of precipitation in ten different showers, while the average precipitation for 28 years for July has been 2.84 inches and for August 3.04 inches. In spite of the drought, however, we are going to have on the D.L.A. plats fair yields of Reed Kafir, fair yields on some plats of milo, while broom corn will be very short and probably of poor quality. The cowpeas have withstood the drought better than the other crops and since the weather has become cooler, are full of bloom and are making considerable growth. A few of the seed rows of the earlier varieties have been harvested. Some varieties in the hay test have also been harvested. Corn has been hauled in and husked but not weighed as yet, but the yields apparently will be very low. Several bushels of peaches were picked early in the week and a few more the latter part; some plums were picked, also several hundred pounds of grapes.

Other work during the week has consisted of soil sampling, watering some trees and shrubbery set out this year, pulling broom corn on Cereal Project, also harvesting of Sudan grass on D.L.A.

Mr. C.W. Warburton, of Washington, D. C., and Professor S. C. Salmon, of Manhattan, were station visitors on September 6 and 7.

Maximum temperature 95, minimum 60. Average wind velocity 5.3 m.p.h. Evaporation 2.090 inches.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

SEP 15 1923

REPORT FOR WEEK ENDING SEPTEMBER 15, 1923.
(Unless otherwise indicated.)

HUNTLEY:

An abrupt drop in temperature early in the week has been followed by continued cold weather. Although freezing temperatures have not been recorded the effects of light frosts are shown on melon and tomato vines.

Cane, Sudan grass and late corn varieties have been harvested and also the silage corn variety test.

The First Annual Huntley Project Fair is in progress at the Station today. From the comparatively large number of corn exhibits entered and the interest taken in this part of the show the future of this crop in this community seems assured. Much of the corn displayed would have been a credit to any fair in the corn belt.

Maximum temperature 88, minimum 35; precipitation 0.

SHERIDAN:

Harvesting of all forage crops was completed the first of the week, with the exception of soy beans and cowpeas. Grasshoppers are cleaning up each variety of these crops shortly before they begin to ripen.

The flax was threshed Tuesday. Yields ranged from very poor on the M.C. plats to about 11.0 bushels on some of the 2-year rotations. It will be necessary to clean the flax from all the plats before final yields can be determined.

Russian thistles have been mowed and are being raked from the plats to be plowed this fall. While there were few thistles in the grain except around the edges of some of the plats, a heavy growth of thistles has been made since harvest.

The "E" plats of the M.C. series were plowed and subsoiled yesterday, and the fall listing of the "F" plats completed. Fall plowing of plats for winter wheat has been completed and preparation for seeding is now in progress. The potatoes in Rotation No. 37 were dug yesterday. The yield was at the rate of about 100 bushels per acre, but of all sizes and shapes, very few of them being of a marketable grade.

The weather during the past two weeks has been excellent for field work and for the curing of forage crops. A light frost occurred on the morning of of the 12th. A portion of the leaves of tender vines were killed. It was not general over the region about here, however.

Maximum temperature 86, minimum 33; precipitation 0.

DICKINSON:

The week has been dry with seasonable temperatures. The first killing frost came on the night of September 12, just the average date. This killed the leaves of corn in low places but no material damage resulted as the crop was practically mature.

The silo was filled September 11 and 12 with Rainbow flint and Northwestern dent. Rainbow flint produced about twice as much silage as the Northwestern dent, but the quality is not so good as the percentage of ears is much less.

Flint corn varieties were husked and weighed during the week. Several varieties yielded over 60 bushels an acre after making a fair deduction for drying. This high yield is the result of a thick stand as well as large well matured ears. Last year the ears were almost as good but stands were thinner due to cutworm damage. Dent varieties likely will yield less than the flints.

Sorghum varieties and Sudan in rows were cut September 12, also the last of the flax in the tillage experiment.

Maximum temperature 84, minimum 30; precipitation 0.

MANDAN: Week ending September 8.

Agronomy.

The fore part of the past week was hot with high winds. The latter part of the week was cool. High winds prevailed practically every date of the week.

Corn in the rotations was harvested during the week. Corn dried up badly early in the week, and a loss of leaves resulted while harvesting. The corn varieties are being cut today. The indications are that the highest yield of corn produced since the station started will be obtained this season.

Summer fallow plats in the rotations are being cultivated today with the duck-foot cultivator for the third time this season.

A small block of millet, some alfalfa for seed, and the silage crops, were harvested for the Office of Forage Crop Investigations during the week.

The threshing of oats was completed the latter part of last week. The yield varied from 17 bushels per acre on fall plowing, to 44 bushels per acre on disked potato ground.

The total rainfall for August was 1.15 inches. The 45-year average for the same month is 1.93 inches. The total precipitation for the year to September 1 was 11.14 inches. The 45-year average for the same period is 13.77 inches.

Maximum temperature 95, minimum 44; precipitation .47 inch.

Mandan, continued:

Cooperative Grazing Experiment.

The gains of the cattle during the month of August were above normal for the month. The flies were not as bad as during July and the cattle were able to partly make up for the light gains during July.

The gains of the cattle in pounds per head for the month of August and for the season are presented below. Each pasture carries ten head of 2-year old steers, except the Rotation and the Brome-grass pastures which are carrying 16 head.

Pastures	August Gains	To September 1.
100-acre	69.0	284.5
70-acre	64.5	293.5
50-acre	82.0	296.5
30-acre	34.5	199.5
Rotation (70 acre)	85.9	280.0
Brome (35 acre)	48.8	249.1

The 30-acre steers are still on their pasture but they will, no doubt, need to be moved soon as the pasture is very short and they have made practically no gains during the past ten days. The 50-acre steers will lose no doubt, before the end of the season as their pasture is getting short. The brome grass pasture is very short at the present time, and unless a good rain comes soon, the cattle will have to be moved.

Horticulture.

Fruit picking and vegetable harvesting has been in progress throughout the week. All except the latest varieties of plums have been picked, and yields have generally been better than in any previous year. Part of the crab-apples have also been picked. This is the first year that any quantity has been produced. There were also several bushels of Hibernal apples.

Tomato seed from selections has been washed out, the celery has been hilled up for the second time, and string around this year's buds is now being cut. Grape selections have also been made.

Mr. Wilson and Mr. Baird attended a Horticultural meeting at Valley City on September 7 and 8. A number of good fruit exhibits were shown, and a new State Horticultural Society was organized by the nurserymen and growers.

MANDAN:

Agronomy.

The past week has been favorable for all field work. Temperatures for the week practically normal. A light frost on the night of September 12 killed tender vines when the temperature dropped to 33° F.

Mandan, continued:

Considerable seed corn was picked during the week. Corn should be in excellent condition for seed as it was practically dry when picked.

Sorghum varieties for the Office of Forage Crop Investigations were harvested during the week. Green weights were taken for all the varieties. The yields for the season are high. Some varieties made better than 15 tons per acre green weight.

A few rows of Navy beans were harvested for the Office of Soil Bacteriology and Plant Nutrition Investigations.

Winter Rye and Winter Wheat were seeded during the week. The soil is so dry that it is doubtful if they will come up before a good rain.

Weeds in the rotations made a heavy growth on all stubble plats since harvest. The weeds on all plats to be fall plowed have been mowed, raked off and burned. The weeds were so heavy that it would not have been possible to do a good job of plowing. Fall plowing should start early next week.

Cooperative Grazing Experiment.

Native vegetation is dried up at the present time and has made practically no growth during the past month and a half.

Check weights on the steers on the brome grass pasture and those of the 30-acre pasture, show slight losses for the first half of the month. The indications are that they will lose in weight rapidly during the next week or ten days.

Horticulture.

All fruit has now been harvested. Emerald plums were the last to be picked, and were unusually good in size and quality. Grapes yielded fairly well this year, and a number of selections were made. Crab apples, particularly the Transcendent crab, yielded fairly well.

Raffie around the buds has been cut, and it now appears that there will be a good stand of buds next spring.

The acre garden continues to yield well, onions are being harvested and look very good. Geranimum cuttings for the grounds next year are being made.

Arboriculture.

Field inspections of shelterbelt plantings have been completed and Mr. A. W. Emerson and Mr. Ralph W. Hansen have left to resume their studies at the School of Mines, Rapid City, S. Dakota.

Mandan, continued:

Mr. Wilson addressed the annual meeting of the State Horticultural Society of North Dakota, in session at Valley City, North Dakota, September 6 and 7, on the subject of Shelterbelt Planting. He also inspected the nursery of the Northwestern Nursery Company and a number of old tree plantings on farms in Barnes County,

Maximum temperature 84, minimum 33; precipitation .08 inch.

ARCHER:

Clear dry weather during the week was very opportune in facilitating field work. Continuous cropping of winter wheat was seeded. This occurred a few days after harvest, the shocks being mowed to permit of plowing and seeding. The same was also true of Rotations 568, 571, 572, and 573. All seedings, except that seeded in corn rows, were seeded with the furrow drill. Considerable interest is being shown concerning this implement. The hauling of hay and the cutting of silage have constituted part of the week's work.

The Superintendent in company with Prof. W. L. Quayle attended the State Fair at Douglas. The fair was the largest and most successful held in years. Considerable attention was given the rust resistant wheat exhibit.

Maximum temperature 84, minimum 40; precipitation 0.

AKRON:

The past week was favorable for field work but unfavorable for late fall growing row crops and for winter wheat seeding. The ground is very dry and the sorghums both grain and forage are drying up. The silo was filled during the week and the corn cut from the Rotation Project, the Rotation Extension Project, the Rate and Spacing Project, and from the Cereal Project to be seeded to fall wheat. The remainder of the plums were picked during the week. Some work also was done in the Forestry Planting removing dead trees. Black locusts reveal numbers of the beetles of the borer when cut down, the beetles appearing to be concentrated near the ground level. Cereal Nursery seeding was in progress at different times during the week. Mr. Boyd R. Churchill, who has assisted with the Cereal Work during the summer, left today to resume his studies at the Kansas State Agricultural College. Two high school boys employed here during the summer months left last week to resume their studies in the local high school.

Mr. F. A. Coffman, in Charge of Cereal Work, left Monday for an extended trip through eastern Colorado in the interest of Barbary Eradication work.

Maximum temperature 92, minimum 44; precipitation .31.

NORTH PLATTE:

Only slight precipitation has occurred during the past four weeks. Stubble ground upon which weeds were allowed to grow since harvest is very dry and late fall plowing was done with difficulty during the first week of September.

North Platte,continued:

The dry weather has been very timely in maturing corn, most of which is now safely out of the way of frosts. On the D.L.A. plats all corn was cut and shocked September 13 to 15. The heaviest average yield in the history of the station is anticipated. Winter wheat on 12 corn plats was seeded just previous to cutting the corn. All other winter wheat will be seeded at an early date.

COLBY:

A rain of seventy points of moisture on the night of the 13th placed the ground in excellent condition for germination of wheat that has been sown. A good penetration of this rain was secured so that wheat sown as soon as the ground is dry enough should come up to an early stand. Wheat sown on the 4th of September is an excellent stand now. Some of the D.L.A. plats were too wet for seeding today so that the field of commercial seeding was put in today. The plats will be drilled the first of the week.

Work during the week consisted in measuring plats for seeding, cutting corn on the D.L.A. project, cutting some of the rate of planting milos and Red Ambers, and overhauling the drills for seeding. Also some general clean up work was accomplished. We are rather short of hands at the present time as it is almost impossible to get extra help. There are a few threshing rigs which have closed down because of insufficient help. This is the first shortage of labor in this vicinity for a long time.

Visitors during the week included the following on Friday:- Dr. Brunson, in charge of our Corn Investigation work, Prof. Laude, in charge of Kansas Cooperative Tests, Prof. Johnson, Pathologist, and Prof. Sumner, extension crop specialist, all from Manhattan.

HAYS:

During the fore part of the week the days were warm and the nights cool, During the last three days it has been cloudy, cool and damp, but no rain until today. It has been sprinkling most of this afternoon,(Saturday).

Sorghums continue slowly developing. Some of the earliest varieties have been harvested. The medium varieties need about two weeks more time for maturing. The late varieties need more time.

Work on the project during the week has consisted in plowing, soil sampling, ditching and staking plats getting ready for drilling of winter wheat. On the commercial fields the work has consisted of cutting feed crops and making silage.

Hays, continued:

Among the farmers in this vicinity wheat drilling has been in progress for the past two weeks. In fact, it looks like at least, if not more than, half the area is already drilled. Some of it has been up to a good stand for ten days. No seeding has yet been done on the station except for the date experiments.

Dr. Wooton, of the Bureau of Agricultural Economics, Department of Agriculture, spent Thursday at the Experiment Station.

Maximum temperature 92, minimum 50.

GARDEN CITY:

Cool cloudy weather has prevailed most of the past week. Crops are maturing nicely and if frost holds off for another two weeks most of the sorghum plats will make a good yield. Three showers totaling .77 of an inch of precipitation have been recorded in the past three days and it has rained steadily all day today. Enough moisture has already been received to bring up the wheat that has been planted. None of the winter wheat in rotation on the project has been planted yet, but the drill will be started just as soon as the soil is dry enough to work.

All cowpeas on the project were cut for hay on Tuesday, but owing to the damp weather have not cured much as yet. The yield of hay this year will be light as the hay did considerable damage to all cowpea plats.

Maximum temperature 93, minimum 50; precipitation .77 inch.

BIG SPRING:

Weather conditions remained unchanged for the past two weeks until the night of September 14 when .53 inch of rain fell. This rain came too late to help anything except, possibly, the late dates of planting and the second crop of Sudan grass. All of the grain and forage sorghums, with the exception of a few of the late maturing varieties, have been harvested.

This week cotton picking throughout the county started up in pretty good shape. The crop in this section promises to be fairly good, and the price ranging around 27¢ a pound, fairly good returns should be realized this year.

Last week an increase field of Sumac was cut and some increase spur feterita was headed. This week the work has consisted mainly of picking cotton.

Station visitors consisted of Messrs. McNamara and Beckett of the Greenville Cotton Breeding Station, Prof. Salmon of the Kansas Agricultural College, and Mr. Warburton of the Cereal Office.

Maximum temperature 98, minimum 57; precipitation .53 inch.

WOODWARD:

Between the 19th of June and the 13th of September there was not enough precipitation at any one time to be of any value. On the night of the 13th we received a very gentle rain totaling .76 inch, and on the night of the 14th we had another very gentle rain totaling 1 inch. There was practically no run-off from these two rains and the ground should be in very good condition for planting wheat, which work will go forward at once.

Kafir on the D.L.A. plats is nearly mature, and so will not be helped by the rains. Some plats of milo are practically mature, but others may be helped considerably if we do not have a frost too soon. Broom corn is ready to pull and will be very poor. Most of the work during the week has consisted of pulling broom corn, picking grapes, repairing machinery, and getting a small exhibit ready for the County Fair.

Mr. E. F. Chilcott left on the 9th to visit Tucumcari and Dalhart stations, and Mr.J. Sieglinger, of the Cereal Office, left on the 13th to visit Dalhart and Tucumcari Stations.

Maximum temperature 98, minimum 56; evaporation 1.859 inches.
Average wind velocity 5.2 miles per hour.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

REC'D

REPORT FOR WEEK ENDING SEPTEMBER 22, 1923.
(Unless otherwise indicated.)

JUDITH BASIN:

The weather during the past week has been comparatively moderate, with several cool nights during which the temperature closely approached the freezing point. Several showers were received early in the week but the past four days have been quite favorable to harvesting and threshing operations.

The first killing frost of the fall was received last week on the morning of September 11. Although a minimum temperature of only 33 was recorded, corn one-half mile from the weather instrument was completely killed, and sunflowers, potatoes, field beans and several other late maturing crops on the station were injured by the frost. Corn on the rotations in Field A, which is close to the instrument shelter, escaped practically uninjured.

Field work has been devoted to threshing cereal varieties, harvesting corn and seeding winter wheat. With the exception of a few plats of winter rye, seeding of all fall grain has been completed.

Mr. H. L. Westover and Mr. R. A. Oakley, of the Office of Forage Crop Investigations, were visitors at the station.

Maximum temperature 80, minimum 33; precipitation .36 inch.

HUNTLEY:

The cold weather of a week ago has been continued up to the present time. Although frost has not yet been recorded by the instruments the ground has been white one or two mornings and some of the more tender crops show slight frost injury.

The earliest varieties of beans and potatoes are now fully mature and ready for harvesting. Considerable attention has been given, during the week, to eradicating weeds which have made an unusually heavy fall growth this season.

Maximum temperature 88, minimum 33; precipitation .16 inch.

SHERIDAN:

A steady rain fell from early on the morning of the 16th until about noon of the 17th. No field work was possible until yesterday, except for reshocking some of the forage crops to enable them to dry better, and to stake the rotation field for fall seeding.

Plowing in the rotation field was resumed yesterday. The ground is well soaked and plows nicely, for the first time in the fall since 1919. Winter wheat and rye in the rotations, and the varieties of winter wheat, were seeded yesterday.

Sheridan, continued:

Yields of flax as finally determined ranged from 2.9 bushels per acre on plats MC A and D to 10.5 bushels in Rotation 244, fall plowed after corn. The average yield after corn was 8.3 bushels, after wheat and oats 9.5 bushels and after flax 3.8 bushels per acre. The lowest yield in rotation with other crops was 6.6 bushels following corn in Rotation 246.

Maximum temperature 83, minimum 35; precipitation 2.29 inches.

DICKINSON:

The flax tillage experiment, sweet clover varieties and field peas were threshed during the week. It will be necessary to clean the seed before flax yields can be given. The yield of sweet clover seed was better than average. A maximum of 13.5 bushels was obtained from the yellow-flowered in six-inch drill rows.

Dent varieties of corn were husked. The yields were somewhat less than the best flints husked during the previous week, yet several varieties will likely make more than 50 bushels when dry. A corn crib was built also.

Fall plowing was started on the rotations. The ground works well after the rain of .82 inch on the 16th.

Mr. R. A. Oakley and Mr. H. L. Westover, Office of Forage Crop Investigations, visited the station on the 18th.

MANDAN:

Agronomy.

Fall plowing has been in progress during the week and is practically finished. The soil is dry and turns up lumpy. It was necessary to mow and rake the weeds from all plats to be fall plowed before the plowing could be done satisfactorily.

Seed corn was picked from the regular Northwestern Dent seed blocks and a block of Paynes White Dent. The quality of the seed is much above the average and is sufficiently dry to crib.

The weather for the week has been dry and warm. The maximum temperature was 85 degrees on the 22nd, and the minimum 35 degrees. Precipitation for the week was .33 inch.

Horticulture.

Onions, pumpkins and squash, have been harvested in the acre garden, and all gave very good yields. The onions yielded at the rate of over 400 bushels to the acre. Cuttings of tender plants on the grounds, such as geraniums, have been made. Some currant and grape cuttings have also been made for immediate fall planting. Small fruits and grapes are being pruned.

Mandan, continued:

Arboriculture.

Under date of September 15, a circular letter was sent to all of the county agricultural agents in the territory covered by the Shelterbelt Demonstration project, enclosing the five application blanks for the selection of cooperators for 1925 planting. A complete list of every planting in the county, that is still carried in the files as an active cooperator, was also enclosed.

The poplar and ash in the nursery has been run under with the tree digger, preparatory to the work of pulling the trees. Conditions point to a comparatively early harvest this year.

Visitors of the week included Mr. R. A. Oakley and Mr. H. L. Westover, from the Office of Forage Crop Investigations.

BELLE FOURCHE:

One of the best September rains on record fell on September 16 and 17. A total of 1.05 inches fell on these two days. It came so slowly that there was practically no run-off.

The first damaging frost occurred on the night of the 17th. The temperature fell to 32 degrees and a great deal of frost was in evidence the next morning. However, only the most tender of garden plants such as cucumbers and melons were badly damaged. Only about one-third of the leaves on the corn were killed.

All plats of corn on the dry land rotations were harvested on the 21st and 22nd. All of the corn was fully matured and indications are that the yield will be the highest on record. The yield of sorghum should likewise be exceptionally high.

Maximum temperature 86, minimum 32; precipitation 1.13 inch.

ARCHER:

During the first half of the week the weather was very humid. Four showers occurred with a total precipitation of .46 inch.

The work at the station has consisted of putting up silage. This crop is much heavier than usual. The sunflowers were rather dry and should have been put in the silo some time ago. The corn is in fine condition with a large percentage of ears. Silage work will be complete in a day or two more.

Maximum temperature 78, minimum 37; precipitation .46 inch.

NORTH PLATTE:

Showers early in the week totaled 1.20 inches of precipitation. This has made it possible to prepare good seed beds for winter wheat by all methods. Seeding on the D.L.A. plats will be completed today. Frost is still holding off. The minimum temperatutre for the fall to date is 40 degrees.

COLBY:

Weather conditions towards the end of the week were ideal for the ripening of the sorghums and of late corn. The first real windy weather which we have had for some time was yesterday and today. These two days were also warmer than we have been having so that vegetative growth should be checked. The weather for the past two weeks has been too damp and cold for the maturing of the crops properly. We have not had a killing frost. It will take approximately ten days for the later corn and early sorghums to be fully mature before frost.

The remainder of the corn plats on the D.L.A. project were cut this week. The 12-inch and 18-inch rates of planting Dwarf yellow milo and the eight-inch spacing of Dwarf yellow milo for the June 4 and June 16 dates of planting were cut today. As a preliminary estimate we would say that the eight-inch spacing of milo planted on June 16 is the best milo ever produced on the station. The heads of the milo are well developed, of good size and there is a good number of them. The six of the earliest corn varieties were harvested today. Some head selections of Dwarf yellow milo were made, paying particular attention to the character of the stalk. Three classes of the heads were made; those from very juicy and very sweet stalks, those from juicy stalks but not especially sweet stalks, and those from typical pithy milo stalks. A few more smut heads from the milo were selected out. These smut heads average one to the tenth-acre plat.

All of the winter wheat plats on the D.L.A. project were seeded during the week, except the plat which follows milo and the plat which follows pinto beans. The rate and direction tests with the furrow and press drills were also seeded this week, as were the winter wheat varieties and the winter wheat winter hardiness nursery. Moisture conditions are ideal for early germination. Winter wheat is showing emergence at the end of five days and a stand by the end of seven days this fall. For all of our seeding, except varieties, we have used wheat which we grew in 1922 and saved over from last year as the quality of our wheat was so low and ununiform this year. Wheat seeding is approximately half completed in the county at the present time.

It will be approximately ten days before the milo and kafir plats on the D.L.A. project will do to harvest. There would be some milo if frost would come now. Commercial fields of sorghums for feed never looked better than they do at the present time.

HAYS:

The fore part of the week was cloudy and very damp. The latter part of the week has been warmer and breezy.

Most of the precipitation for the week fell on the night of the 16th. While there was considerable loss by run-off, there was a good portion that went into the ground, especially the plowed fields. This is very encouraging to the farmers. It was the best rain for more than two seasons, and came at a time which makes conditions for seeding of winter wheat ideal.

Due to the rain, the fields were too wet to permit of any field work during the first four days of the week. The heavy rains makes it advisable to harrow the fallowed and early fall plowed plats which are to be sown to winter wheat. This is now being done.

Kafir is slowly maturing. A few warm days will now make it ready for harvest.

Maximum temperature 79, minimum 46; precipitation 3.98 inches.

GARDEN CITY:

The past week has been the wettest one during the season. On the 16th 1.22 inches of rain were received, on the 17th 3.68 inches, and the 18th .3 of an inch, making a total for the week of 5.2 inches. The total rainfall for the year amounts to 31.39 inches which is 13.82 inches above the normal and is 4.88 inches above the maximum annual rainfall for the past fifteen years. A great deal of the moisture has been lost through run-off this year as most of our rains have been of a torrential nature.

Most crops on the station are ripening up in good shape. Milo and kafir will be ready to cut in another week or ten days. The cowpeas, which were cut for hay last week, were badly damaged by the recent rains.

The winter wheat on the first three dates of planting is up to a fair stand.

Work this week has consisted of cutting a part of the sorghums in the date of planting test, weighing the cowpea hay, planting the fourth date of winter wheat, roguing, and doing odd jobs.

Maximum temperature 84, minimum 43; precipitation 5.2 inches.

DALHART:

The past week has been cool and damp with heavy dews at night. The temperature during the days has been a little low for this time of year. There were four days during the week with rain. The total for these four days is 1.20 inches. This rain puts the maximum for the year within a close margin of 1915, which was a banner year.

Crops are still making fair progress toward maturity. While the prospects are good for an early frost it is quite likely that most of the crops will mature. Some of them are already past danger of getting caught. There will be an abundance of bundle feed raised in this section regardless of frost. One plat of cowpeas was harvested this week in the variety test. While the cowpeas have made an extra good yield this year it is going to be hard to cure them so as to make good hay on account of the recent rains.

Last week the third and fourth dates of broomcorn were harvested, and the brush racked in the implement shed to cure. The yields of brush this year are going to be considerably above the average. The quality of the brush is good. Nothing has been harvested with the binder for the past two weeks on account of the rains. The fields will not permit any binding before next week if no more rain occurs. All of the winter rye was seeded on the rotations, etc., on the 14th and was emerged to a good stand by the 19th. Rye and sweet clover were seeded together in the stubble of forage sorghum in the blue weed pasture. These are up to a good stand at this writing. It is hoped that the sweet clover will compete with the blue weed and eventually kill it out as it is doing with other weeds on the roadway. Some pasturing work will be carried on with the sweet clover.

On Saturday of last week Messrs. E. F. Chilcott and D. R. Burnham arrived in Dalhart to visit the station. On Sunday evening Mr. J. B. Sieglinger arrived. Monday was spent in going over the station and looking over some of the neighboring farms. Mr. Sieglinger remained until Wednesday noon when he left for Woodward, Oklahoma. Thursday, Mr. B. M. King arrived to look over the cotton situation. On the same day Mr. L. C. Whitehead of the Biological Survey arrived and visited the station. A trip was made with these men over the district south of the station.

Maximum temperature 81, minimum 46; precipitation 1.20 inches.

TUCUMCARI: Week ending September 15, 1923.

Crop growth has been rapid the past week, although plants are not ripening. Since the heavy rains of a month ago, sorghums have put out numerous branched heads and suckers. It seems likely that a small percentage of these late heads will mature. Increase milo and a number of the milo plats in the north field have been headed.

Gravel and cement were hauled during the week and the collar for the pit silo made. Digging of the silo has begun.

Tucumcari, continued:

Mr. E. F. Chilcott, of Woodward, arrived the middle of the week and will drive to Clayton and other points, accompanied by the writer.
Maximum temperature 88, minimum 56; precipitation .19 inch.
Evaporation 1.495 inches. Average wind velocity 2.1 miles per hour.

TUCUMCARI:

MCA wheat and rye plats were plowed, all MC wheat and rye plats spring tooth harrowed, and seeding done on the A, B, and C plats. Soil and weather conditions are favorable for germination and growth and it is possible sufficient growth will be made this fall to overcome soil blowing on these plats.

Cowpea plats in the north field were harvested, after a small amount of seed had been picked. Hay yields should be high, for apparently the peas had doubled in growth since the middle of August, when drought had caused them to stop growth. All fallow plats in the north and center fields were disced and roadways mowed.

Harvesting of some date plats and most of the broomcorn plats was done this date. Early planted broomcorn made fair yields of good brush, but the late plats produced very little saleable brush, for the excess amount of moisture late in August resulted in a heavy percentage of "tree tops". On some plats as much as 80 per cent of the brush was not worth pulling. Forage yields of broomcorn will be heavy and of unusually good quality.

Mr. E. F. Chilcott and the writer returned from Clayton and Dalhart and intermediate points on Tuesday. A large portion of the dry farming area of northeastern New Mexico was covered on this trip. B. M. King of Lawton visited the station Wednesday, examining the cotton project.

Increase sorghums look exceptionally well and will make an abundance of steer feed. Grain sorghums continue to grow, but are maturing very slowly. It is probable that a great percentage of the late dates and several of the variety plats will only partially ripen before frost. Cotton plats have a number of apparently mature bolls, but opening has not begun. Temperatures have been unusually cool the past few weeks, resulting in rapid vegetative growth of all plants, but unfavorable to ripening.
Maximum temperature 84, minimum 48; precipitation .15 inch.
Evaporation 1.250 inches. Average wind velocity 3.4 miles per hour.

BIG SPRING:

Weather conditions this week have remained cool and very condusive to farm work. The rains of last week soaked things up pretty well, and was a great help to late sown feed crops. This feed, which was well on the way to being burned up, will now nearly mature.

Big Spring, continued:

Cotton picking is in full swing throughout this vicinity and all gins are running to full capacity. With cotton selling at about 29 cents a pound, the farmers are getting it on the market just as fast as they can get it picked.

Station work this week has consisted mainly of heading feterita, picking cowpea seed and cotton, and in harvesting some of the later dates of planting of sorghums.

Maximum tempterature 89, minimum 55; precipitation .62 inch.

LAWTON:

Rains from the 16th to 20th varying in amount each day from .11 to 1.02 inches totaled 2.16 inches. In many places througout the county more than twice that amount was reported. Several days of cool, cloudy weather followed and the ground dried slowly.

Vegetation of all sorts is green and weeds have renewed troublesome growth.

Considerable wheat has been seeded for early pasture but the bulk of the planting will be made within the next ten days. Cotton on the station continues to open slowly. Some picking will, however, be necessary within the next few days. Burrs have rotted on bolls that were forced open prematurely by the drought. Where this occurred extensively farmers are pulling the entire boll instead of picking the lint out.

The acreage of winter barley is gradually increasing. The 1923 crop was quite satisfactory and a brisk demand for seed exists among the farmers this fall.

Maximum temperature 85, minimum 51.

WOODWARD:

From the 11th to the 18th we had a total of 6.07 inches of precipitation, which was the first of any consequence since June 19. The County Fair was to have been held the first three days of this week, but on account of the weather it was continued for the entire week.

The fore part of the week was spent in repairing machinery and other odd jobs, the latter part in sowing wheat, picking fruit and budding peaches.

Mr. E. F. Chilcott and Mr. J. B. Sieglinger returned from a trip to the Dalhart Station. Mr. King of the Lawton Station was here today, the 22nd.

Maximum temperature 81, minimum 50. Evaporation 1.509 inches.

Average wind velocity 6.4 miles per hour.

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U. S. DEPARTMENT OF AGRICULTURE

REPORT FOR WEEK ENDING SEPTEMBER 29, 1923.
(Unless otherwise indicated.)

HUNTLEY:

With the exception of Sunday, rain has fallen every day during the past week and it is still coming down today. The only field work done has been a little fence repairing and some miscellaneous cleaning up around the fields. The wet weather has put a stop to thrashing and seeding operations throughout this part of the state, a large amount of which work still remains to be done. Farmers have reported that early planted winter wheat is up and making a very heavy growth. In some instances grasshoppers are doing considerable damage to the crop.

Maximum temperature 76, minimum 40; precipitation 2.93 inches.

SHERIDAN:

Field work has been possible only during a part of the first three days of the week. Rain has fallen fairly steady from about 3.00 a.m. Thursday until the present time.

Plowing of the rotation plats was completed Tuesday, and plowing of the check plats was begun.

The rainfall for the present month is the heaviest recorded here or at the Sheridan Weather Bureau station for any one month, the total to the present time being 7.14 inches. There was very little run-off Thursday, but yesterday it was considerable, and during the past 12 hours has been heavy.

Maximum temperature 80, minimum 33; precipitation 4.74 inches.

DICKINSON:

The feature of the week has been the heavy rainfall, which now totals 3.23 inches. This came in two rains, one on the night of September 25, amounting to 2.19 inches and the other on the night of the 23th, amounting to 1.09 inches. The total to date for the month is 4.20 inches, a high record for September in 32 years at Dickinson. The previous high was 3.70 inches in September, 1903.

Mild temperatures have followed the rain. There was practically no run-off in fields and the ground is now saturated well into the second foot. Much fall plowing has been started and a large acreage will be plowed unless the ground freezes unusually early.

Most of the rotation plats were plowed before the last rain. All of the fall plowed corn plats are to be plowed.

Husking of the corn on the rotations is more than half completed. While it has not been weighed it appears that this will be the biggest corn crop during the 16 years with the possible exception of that of 1909 when the average was 50 bushels.

Dickinson, continued:

Mr. J. M. Stephens and Mr. J. G. Diamond, Federal Crop and Livestock Statistician, Grand Forks, North Dakota, visited the station September 27.

Maximum temperature 72, minimum 42; precipitation 3.23 inches. Total precipitation for September 4.20 inches; 31-year average for the month is 1.10 inches. Total precipitation January 1 to September 30, 1923 is 18.12 inches; 31-year average for the same period is 13.53 inches.

MANDAN:

Agronomy.

The weather for the week has been moderately cool, with no killing frosts. Precipitations, aggregating 1.42 inches, occurred on the 25th and the 29th. This brings the annual total to date up to 13.44 inches, which makes our deficit up to the end of September less than one inch. The rains should be very beneficial to fall seeded rye and wheat. Subsoiling and listing in the rotation experiments were completed during the week. Listing in the south field was very difficult, owing to its dryness and heavy texture.

Finishing of flax, alfalfa and millet threshing has been delayed owing to the recent rains. With drying weather this coming week, threshing should be completed and a start made on corn husking and shredding.
Maximum temperature 74, minimum 47; precipitation 1.42 inches.

Cooperative Grazing Experiment.

Cattle weighings on the 23th show some gains for all groups of steers. The Brome steers which were put in the Reserve pasture at the last weighing show about half the steers with individual losses. They were placed back on the brome on the 23th.

Horticulture.

Harvesting in the acre-garden has now been completed. Beets, rutabagas, carrots and parsnips have been dug and put in storage. Beans have been pulled and stacked. Celery is being harvested and is of unusually good quality. Muskmelons continued to yield well, very late this year.

Most of the wild grape seedlings in the plant breeding series are now being pulled out and discarded. Cuttings of all selections have been made.

Arboriculture.

The pulling of shelterbelt nursery stock is now under way. This work should be completed by the middle of October - a week earlier than last year.

Visitors of the week included Mr. Orris W. Roberts, Meteorologist, In Charge, Weather Bureau Station, Bismarck, North Dakota, and Mr. Jay G. Diamond, Division of Crop Estimates, Bureau of Agricultural Economics.

BELLE FOURCHE:

The heaviest fall rain on record at this station occurred during the week. It commenced about 7.00 p.m. on the 27th and ended about midnight on the 18th. During that time 4.54 inches of rain fell. There was 4.06 inches of rain during the 24 hours from 6.00 p.m. September 17 to 6.00 p.m. September 18. The total rainfall for September to date is 5.90 inches. The previous maximum for the month was 3.49 inches. The average for September is 1.27 inches.

All plats, regardless of cultivation, will enter the winter with all available moisture storage capacity utilized. It will be at least a week before any plowing can be done. Fortunately all of the plowing on the dry land plats, except the plowing after corn, was completed before the rain.

The winter grains on the rotations were seeded on the 25th. All plats except plat A of the M.C. Series were moist enough to insure germination. The rains later in the the week should enable all plats to make maximum fall growth.

Maximum temperature 75, minimum 41; precipitation 4.60 inches.

ARCHER:

The past week has been very unfavorable for field work. During the fore part the winds were very high and the last half has been wet and murky. On September 27 a storm occurred with a precipitation of .44 inch. This was accompanied by very heavy winds in some localities. While the Laramie County Fair was being held at Pine Bluffs, on the above date, forty cars of a Union Pacific freight train were blown off the track. In certain sections considerable damage was done to buildings. Since the storm continuous wet weather has prohibited field work. As soon as conditions will permit the remainder of the corn will be cut and threshing will begin. To date there has been no frost in this locality.

Maximum temperature 79, minimum 37; precipitation .51 inch.

AKRON: Week ending September 22.

The past week has continued favorable for fall field work but no appreciable relief from the drought has been received. A measurable amount of precipitation has been recorded on five of the past seven days but the total has been only .43 of an inch, the greatest in 24 hours being but .28 of an inch. All the experimental winter wheat plats were seeded during the week, including the Cereal Varieties, the two Sheep Rotation fields, the Rotation Plats and the Rate and Spacing corn ground. The Rotation Rye Plats and the Sheep Rotation rye field also were sowed. There is little hope for immediate emergence except on fallow land and there it is doubtful for the surface is very dry.

Akron, continued:

This marks the third consecutive season that fall wheat seeding has been done on ground too dry to hope for immediate stands. Cutting dead trees from the Forestry Project has continued to receive attention at odd times during the week. Some work has been done in making ready for and in seeding the Cereal Nursery. Grasshopper damage to the early sown wheat on fallow on the Cereal Project which has emerged to partial stands is severe.

Maximum temperature 80, minimum 39; precipitation .43 inch.

AKRON:

One increase field of winter wheat was seeded in oats stubble to make uniform conditions for possible small increase in scope of Rotation Studies another year. Bagged heads of the rips forage and grain sorghum varieties were brought in and stored. Ripe forage varieties were harvested and shocked. Work in the Forestry Project continued. Work on the Cereal Nursery continued. Destroying and burning dead weed growth about the station grounds were completed. No rain of appreciable consequence to bring up wheat already sowed. Seeding of winter wheat on farms in full blast. Considerable wheat is being drilled in on disked winter wheat stubble and on disked corn and cane stubble in this immediate neighborhood. The first light frost occurred September 29.

Maximum temperature 86, minimum 32; precipitation .03 inch.

COLBY:

The mean daily temperatures for the past week have averaged 65. The maximum temperature has been 89 on the 27th, and the minimum temperature has been 36 on the night of the 28th. The latter is the only temperature recorded below 40.

Milo appears to be the only sorghum which is ripening appreciably. Other sorghums are but very little further advanced than they were a week ago. No plats were harvested during the week. One field of Early Sumac was cut.

Visitors during the week included Mr. A. B. Carney and Mr. R. M. Williams, of the State Board of Administration.

Wheat is up to a good stand and looks fine. Our silos have not been filled. Possibly this can be done during the coming week.

HAYS:

The weather during the week has been unsettled and very changeable, including a touch of most of the extremes for this season of the year as follows: hot and cool, dry and damp, bright and cloudy, quiet and windy. Several threatening storms came close, and heavy rains reported near, but only .18 inch rain was recorded at this station and this was the total of three showers on as many different days.

Hays, continued:

During the week considerable kafir and milo was hand picked for seed. The last seedbed preparation work for winter wheat was finished, including the spreading of commercial fertilizer. The third and last crop of alfalfa for the season from the botton land plats was harvested September 26. This is the first of several seasons when only three crops of alfalfa have been produced on the bottom land, and two of these were unusually light.

A student from South Africa spent Thursday and Friday on the Experiment station studying methods and results of the work on the experimental projects.

Maximum temperature 95, minimum 50.

GARDEN CITY:

Comparatively low temperatures have prevailed throughout the past week. All sorghum crops are ripening nicely and will be ready to harvest by the last of the coming week. Corn will be cut the first of the week.

Work this week has consisted of preparing the seed bed for winter wheat. It is hoped that conditions will enable us to get the wheat seeded the first of the week. Wheat in the date of planting test is looking good.

Station visitors this week included Professor J. H. Parker, of Manhattan, Superintendent G. E. Lowred, of the Tribune Station, and two members of the State Board of Administration.

Maximum temperature 89, minimum 41; precipitation 0.

DLAHART:

The week has been rather cool with minimum temperature dropping to 40 on the 28th. The days have been fairly warm but a little below the average. One rain occurred during the week netting .43 inch. This was sufficient to stop field work for several days. The fields were dried off sufficiently by Tuesday of this week so that some muchly needed harvesting could be done.

Harvesting during the week covered several of the dates of planting as follows: Fifth date of Sudan Grass, second date of Dwarf Feterita, third and fourth dates of Standard Feterita, second date of Dawn Kafir, and third and fourth dates of Broom Corn.

The following varieties were harvested: Standard Feterita, Hegari, Dwarf Yellow and White Milo and Whipporwill and Brabham Cowpeas. Seed was picked from the Taylor and New Era cowpeas. Some seed Sudan was harvested from an increase field. Winter wheat was sown on a rotation which is just being put in on probation. A new variety of winter rye was planted on a spare plat of oat stubble to get a comparison with the seed used on the rotations.

Dalhart, continued:

The cotton, while looking good, has very few bolls set and is still blooming. There is so much sap in it at this time that there is very little liklihood of its being any good at all. The cool weather has put a stop to its progress.

From present indications it is quite likely that all the experimental plats will mature seed. The increase fields will have to hurry along or frost hold off if they make any mature grain. If they do mature, however, there will be an exceptionally heavy yield of grain. These increase fields were planted after the first of July, which was as early as it was possible to get to it on account of delays from the wet weather of June.

Maximum temperature 84, minimum 40; precipitation .43 inch.

TUCUMCARI:

Cowpea plats in the north field, cut last week, were cocked, but have not cured sufficiently for hauling. Plats cut last week were shocked, while a number of Sudan plats were hauled. Heading of milo plats in the North Field has been progressing but slowly, for digging of the pit silo has been the most urgent job of the past week. The silo is now nineteen feet deep and one day's work will complete the digging and leveling of the dirt.

Cane is still growing and some heads are maturing, although many stalks have not headed. Kafir is still putting out late branched heads and indications are that the grain yield will be low, although fodder will make high yields. Cotton has not begun to open, although there are many hard, apparently mature bolls.

The writer spent two days in Amarillo this week, attending the Tri-State Fair. The county exhibits, the implement show, and the cattle exhibits were by far the most outstanding features of the fair.

Maximum temperature 88, minimum 45; precipitation 0. Evaporation 2.083 inches. Average wind velocity 5.2 miles per hour.

BIG SPRING:

Weather conditions have remained warm and dry during the past week. These conditions have caused cotton to open rapidly, and as a result every one is looking for pickers with the supply meeting about half of the demand.

This week the station cotton was picked over for the second time; the weights obtained thus far would seem to indicate that nearly all the plats would yield about a half bale per acre. The second cutting of Sudan grass in the increase fields was made this week. Although the yield was decreased very materially by the dry weather, the quality of the hay will be very good.

Maximum temperature 99, minimum 63; precipitation 0.

ARDMORE:

The total precipitation for the month of September was 1.52 inches. All of this fell during the latter half of the month and most of it during the last week. Exceptionally heavy rains have been reported throughout a wide section during the past three or four days. Much damage has been done to wagon roads and railroads. At Arvada the Burlington bridge is out over Powder River, and the road will be tied up for a week or more. The wagon bridge is out at Edgemont over the Cheyenne River.

Winter wheat was seeded on the station last week. As a result of the recent rains the ground is in unusually good condition for fall plowing. For the first time in the history of the station this work is being done when the soil is not dry. About 200 acres are to be fall plowed and the work is being pushed in every possible manner.

The Superintendent of the station judged all live stock exhibits last week at the Western South Dakota Fair at Rapid City. The Duron hog show was exceptionally good. Some of the finest animals in the State were on exhibit at this show, and the show throughout showed much advancement in breeding.

Mr. J. T. Sarvis visited the station all week and did considerable work in connection with the grazing experiment. He is at present tied up at Ardmore because of wash-outs on the railroads.

LAWTON:

Cotton bolls opened with rapidity the past week under warm, sunshiny weather. The nights were warmer, there was less dew and the wind velocity was higher than it has been for some time.

Picking was contemplated the latter part of the week and also the weighing of a good many sorghum plats. Such work, however, was prevented by a rain of 0.61 inch on the 28th, and .07 inch on the 29th. These two rains were followed by a little more than one-half inch today, Sunday.

A period of warm, dry weather is desirable. Under such conditions the premature sorghum crops may be threshed and weighed and the cotton crop handled to much better advantage.

Maximum temperature 92, minimum 65; precipitation .69 inch.

WOODWARD:

We have had another rain of 1.05 inches making a total of 7.15 inches for the month of September, the highest ever recorded for the month since 1895 when records were started in this section.

Woodward, continued:

Most of the work during the week has consisted of preparing the ground and planting wheat on the Dairy Project, and on various blow spots around the station.

All but two plats of kafir, and all of the cowpeas on the D.L.A. plats have been harvested. Some harvesting has been done on the Cereal Project, and most of the cowpeas hay variety tests have been harvested.

Mr. W. W. Burr, Agronomist and Assistant Director, Nebraska State Experiment Station, visited the station today.

Maximum temperature 93, minimum 59; precipitation 1.08 inches. Evaporation 1.923 inches. Average wind velocity 9.7 miles per hours.